

CLAIM AMENDMENTS

Claim 1 (original): A multi-functional power source for producing an external mechanical power, comprising:

a generator, which is adapted for outputting induced electric power, comprising:

a generator housing defining a receiving chamber;

a rotor comprising a magnetic element coaxially and rotatably disposed within said receiving chamber and defining a magnetic cavity within said magnetic element, and

a stator comprising a coil assembly coaxially disposed within said magnetic cavity; and

an engine arrangement, comprising:

an engine casing;

an internal combustion engine disposed in said engine casing:

an elongated crankshaft having an driven portion extended from said internal combustion engine and a driving portion extended out of said engine casing to couple with said rotor in such a manner that, when said internal combustion engine produces a mechanical power to drive said rotor to rotate through said crankshaft, said magnetic element is coaxially rotated to induce with said coil assembly for producing said induced electric power; and

an output axle, having an output end, integrally extended from said crankshaft to a position out of said generator housing such that when said crankshaft drives said output axle to rotate, said output end of said output axle is adapted for producing said external mechanical power even when said generator is producing said induced electric power.

Claim 2 (original): The multi-functional power source, as recited in claim 1, wherein said output axle is integrally and coaxially extended from said driving portion of

said crankshaft while said output end of said output axle is coaxially extended through said magnetic cavity to an exterior of said generator housing.

Claim 3 (original): The multi-functional power source, as recited in claim 2, wherein said engine assembly further comprises a second output axle, having a second output end, integrally and coaxially extended from said driven portion of said crankshaft while said second output end of said second output axle is coaxially extended to an exterior of said engine casing at a direction opposite to said output end of said output axle.

Claims 4-5 (cancelled).

Claim 6 (original): The multi-functional power source, as recited in claim 3, wherein said rotor further comprises a tubular sleeve rotatably disposed in said receiving chamber, a flywheel coaxially and rotatably mounted to an inner circumferential sidewall of said tubular sleeve, and a flywheel starting gear securely engaged with said flywheel to coaxially couple with said driving portion of the crankshaft, wherein said magnetic element is coaxially attached to said inner circumferential sidewall of said tubular sleeve in such a manner that when said flywheel starting gear is driven to rotate via said crankshaft, said flywheel is driven to rotate to drive said magnetic element to rotate via said tubular sleeve so as to induce said magnetic element with said coil assembly for producing said induced electric power.

Claim 7 (currently amended): The multi-functional power source, as recited in claim 4 1, wherein said generator further comprises an air ventilation arrangement which has a plurality of ventilating through holes evenly formed on said tubular sleeve to radially project with respect to said magnetic cavity and comprises a plurality of fan wings radially provided at a front side of said flywheel to respectively align with said ventilating through holes in such a manner that when said flywheel is driven to rotate, said fan wings are adapted for ventilating an air within said tubular sleeve through said ventilating through holes.

Claim 8 (currently amended): The multi-functional power source, as recited in claim 5 2, wherein said generator further comprises an air ventilation arrangement which has a plurality of ventilating through holes evenly formed on said tubular sleeve to radially project with respect to said magnetic cavity and comprises a plurality of fan

wings radially provided at a front side of said flywheel to respectively align with said ventilating through holes in such a manner that when said flywheel is driven to rotate, said fan wings are adapted for ventilating an air within said tubular sleeve through said ventilating through holes.

Claim 9 (original): The multi-functional power source, as recited in claim 6, wherein said generator further comprises an air ventilation arrangement which has a plurality of ventilating through holes evenly formed on said tubular sleeve to radially project with respect to said magnetic cavity and comprises a plurality of fan wings radially provided at a front side of said flywheel to respectively align with said ventilating through holes in such a manner that when said flywheel is driven to rotate, said fan wings are adapted for ventilating an air within said tubular sleeve through said ventilating through holes.

Claim 10 (original): The multi-functional power source, as recited in claim 2, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc, having a central stator hole, securely supported within said magnetic cavity, wherein said output axle is coaxially extended through said central stator hole to said exterior of said generator housing.

Claim 11 (original): The multi-functional power source, as recited in claim 6, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc, having a central stator hole, securely supported within said magnetic cavity, wherein said output axle is coaxially extended through said central stator hole to said exterior of said generator housing.

Claim 12 (original): The multi-functional power source, as recited in claim 8, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc, having a central stator hole, securely supported within said magnetic cavity, wherein said output axle is coaxially extended through said central stator hole to said exterior of said generator housing.

Claim 13 (original): The multi-functional power source, as recited in claim 9, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc, having a central stator hole, securely supported within said magnetic cavity, wherein said output axle is coaxially extended through said central stator hole to said exterior of said generator housing.

Claim 14 (original): The multi-functional power source, as recited in claim 6, wherein said magnetic element is a magnet, having a ring shaped, securely affixed to said inner circumferential sidewall of said tubular sleeve to define said magnetic cavity within an inner circumferential side of said magnetic element for creating a magnetic field within said magnetic cavity towards said coil assembly.

Claim 15 (original): The multi-functional power source, as recited in claim 8, wherein said magnetic element is a magnet, having a ring shaped, securely affixed to said inner circumferential sidewall of said tubular sleeve to define said magnetic cavity within an inner circumferential side of said magnetic element for creating a magnetic field within said magnetic cavity towards said coil assembly.

Claim 16 (original): The multi-functional power source, as recited in claim 13, wherein said magnetic element is a magnet, having a ring shaped, securely affixed to said inner circumferential sidewall of said tubular sleeve to define said magnetic cavity within an inner circumferential side of said magnetic element for creating a magnetic field within said magnetic cavity towards said coil assembly.

Claim 17 (original): The multi-functional power source, as recited in claim 1, wherein said output axle is integrally and coaxially extended from said driven portion of said crankshaft while said output end of said output axle is coaxially extended to an exterior of said engine casing at a direction opposite to said generator.

Claim 18 (original): The multi-functional power source, as recited in claim 17, wherein said rotor further comprises a tubular sleeve rotatably disposed in said receiving chamber, a flywheel coaxially and rotatably mounted to an inner circumferential sidewall of said tubular sleeve, and a flywheel starting gear securely engaged with said flywheel to coaxially couple with said driving portion of the crankshaft, wherein said magnetic element is coaxially attached to said inner circumferential sidewall of said tubular sleeve

in such a manner that when said flywheel starting gear is driven to rotate via said crankshaft, said flywheel is driven to rotate to drive said magnetic element to rotate via said tubular sleeve so as to induce said magnetic element with said coil assembly for producing said induced electric power.

Claim 19 (original): The multi-functional power source, as recited in claim 18, wherein said generator further comprises an air ventilation arrangement which has a plurality of ventilating through holes evenly formed on said tubular sleeve to radially project with respect to said magnetic cavity and comprises a plurality of fan wings radially provided at a front side of said flywheel to respectively align with said ventilating through holes in such a manner that when said flywheel is driven to rotate, said fan wings are adapted for ventilating an air within said tubular sleeve through said ventilating through holes.

Claim 20 (original): The multi-functional power source, as recited in claim 17, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc securely supported within said magnetic cavity.

Claim 21 (original): The multi-functional power source, as recited in claim 19, wherein said coil assembly comprises a plurality of wire coils radially positioned within said magnetic cavity of the magnetic element to form a coil disc securely supported within said magnetic cavity.

Claim 22 (original): The multi-functional power source, as recited in claim 18, wherein said magnetic element is a magnet, having a ring shaped, securely affixed to said inner circumferential sidewall of said tubular sleeve to define said magnetic cavity within an inner circumferential side of said magnetic element for creating a magnetic field within said magnetic cavity towards said coil assembly.

Claim 23 (currently amended): The multi-functional power source, as recited in claim 21, wherein said magnetic element is a magnet, having a ring shaped, securely affixed to said inner circumferential sidewall of said tubular sleeve to define said magnetic cavity within an inner circumferential side of said magnetic element for creating a magnetic field within said magnetic cavity towards said coil assembly.